

1           (10) ABSTRACT

2           Methods and apparatus for packing, including single pixel data strings, and  
3           playback tracking of informative data, e.g., audio signals, associated with  
4           graphics. To maximize the signal-to-noise ratio during data recovery, a  
5           Read sensor is kept substantially on-center of each data block throughout  
6           reading. A Print-and-Read ink-jet embodiment carriage mechanism in  
7           conjunction with the paper feed mechanism keeps the Read sensor on track  
8           center as misalignment information has been determined beforehand or in  
9           real time for active track servoing. Additional functionalities are incorporated  
10          in scanning ink-jet class of printers so that they can further operate as  
11          informative data recovery or retrieval systems for digitized data on graphical  
12          data images. In another embodiment, a digital camera itself is provided with  
13          additional functionalities to operate as a recovery and playback device for  
14          prints containing informative data.